

Introducción Metodologías Ágiles Scrum

Tópicos Especiales para la Administración de Proyectos I,
Gestión de los Interesados y el Alcance

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AGENDA

- Problemas con el enfoque tradicional de “cascada”.
- Comparación de Metodologías.
- El Manifiesto Ágil.
- Definición de Metodología Scrum.
- Teoría y valores de Scrum.
- Tipos de proyectos de Scrum.
- Eventos o ceremonias de Scrum.
- Artefactos de Scrum.
- Monitoreo y control.
- Medición de Resultados.
- Aplicación de Scrum.
- Scrum en otras industrias.

SCRUM — MANIFIESTO

Manifiesto por el Desarrollo Ágil de Software

Estamos descubriendo formas mejores de desarrollar software tanto por nuestra propia experiencia como ayudando a terceros. A través de este trabajo hemos aprendido a valorar:

Individuos e interacciones sobre procesos y herramientas
Software funcionando sobre documentación extensiva
Colaboración con el cliente sobre negociación contractual
Respuesta ante el cambio sobre seguir un plan

Esto es, aunque valoramos los elementos de la derecha, valoramos más los de la izquierda.

SCRUM - HISTORY

Jeff Sutherland and Ken Schwaber conceived the Scrum process in the early 90's.

They codified Scrum in 1995.

SCRUM and Rugby

Scrum was first tried and refined at Individual, Inc., Fidelity Investments, and IDX (now GE Medical).

In February 2001, Jeff and Ken were amongst the 17 software development leaders creating the Manifesto for Agile Software Development.

Agile Alliance was founded with Ken Schwaber being its first chairman.

Ken Schwaber co-authored the first book on Scrum with Mike Beedle, Agile Software Development with Scrum.

SCRUM - HISTORY

In 2002, Ken Schwaber founded the Scrum Alliance with Mike Cohn and Esther Derby

In 2006, Jeff Sutherland created his own company, Scrum.inc

Ken left the Scrum Alliance in the fall of 2009, and founded Scrum.org

With the first publication of the Scrum Guide in 2010, and its incremental updates in 2011 and 2013, Jeff and Ken established the globally recognized body of knowledge of Scrum.

More than 1000 books have been published on Scrum.

The method however has also been successfully applied in other domains, e.g. manufacturing, marketing, operations and education.

SCRUM — WHAT IS IT?

Scrum es un framework (Marco de Referencia) para el desarrollo de productos.

Gracias a Scrum las personas pueden solucionar problemas complejos, mientras productiva y creativamente se entrega un producto de la mayor calidad posible.

Qué no es scrum?

Scrum no es un proceso o un conjunto de técnicas para crear productos.

Scrum no es un conjunto de buenas prácticas donde se selecciona lo que se quiere y lo que no.

SCRUM — VALUES

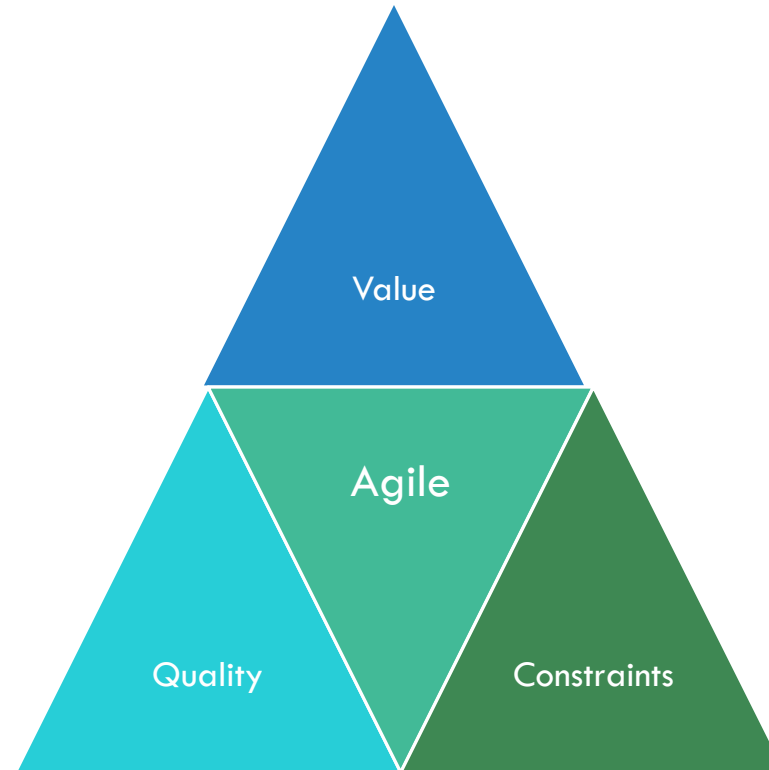
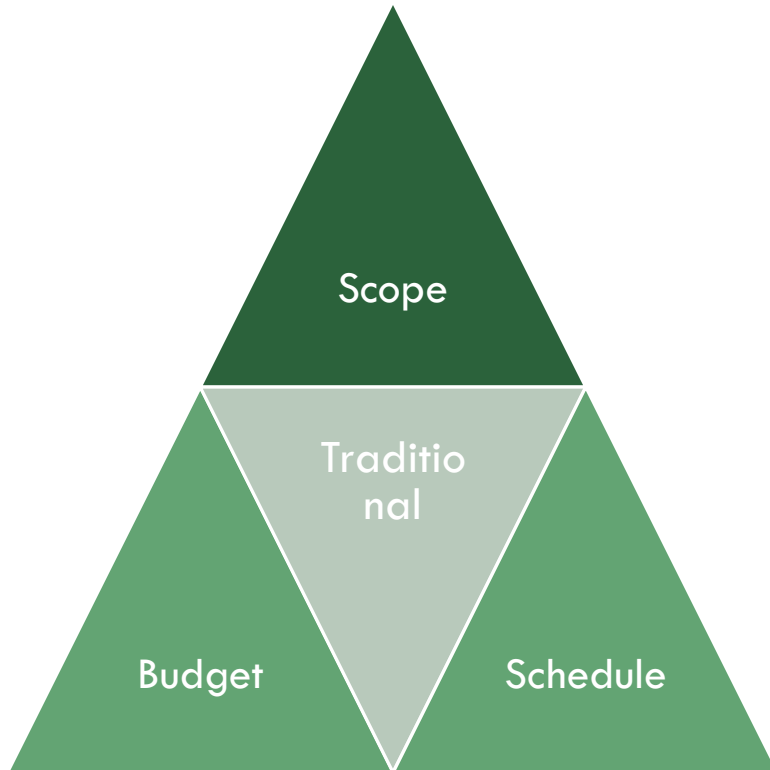
Teoría

- Scrum is founded on empirical process control theory, or empiricism.
- Empiricism asserts that knowledge comes from experience and making decisions based on what is known.
- Scrum employs an iterative, incremental approach to optimize predictability and control risk.

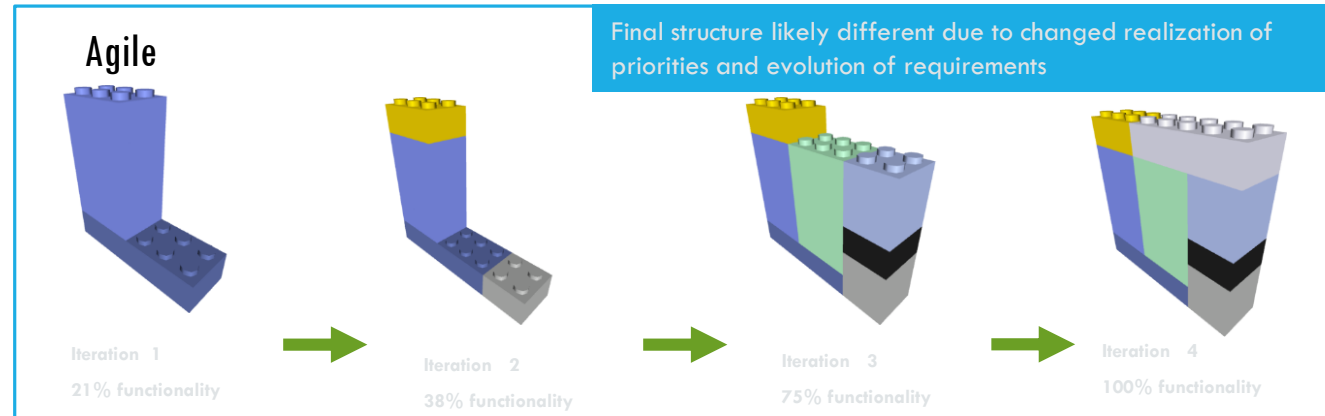
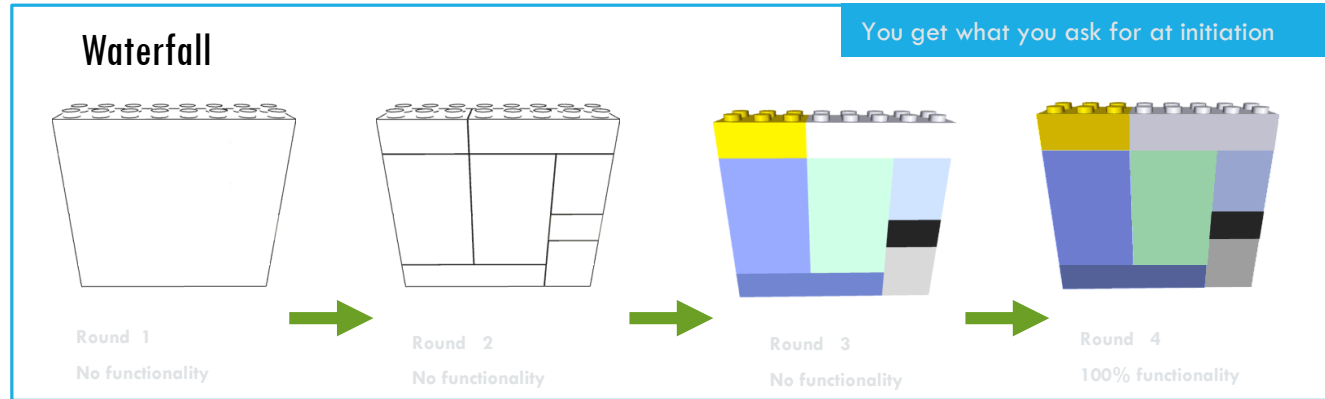
Valores

- Transparency
- Inspection
- Adaptation

PREDECTIVE VRS AGILE — TRIANGLE OF CONSTRAINTS



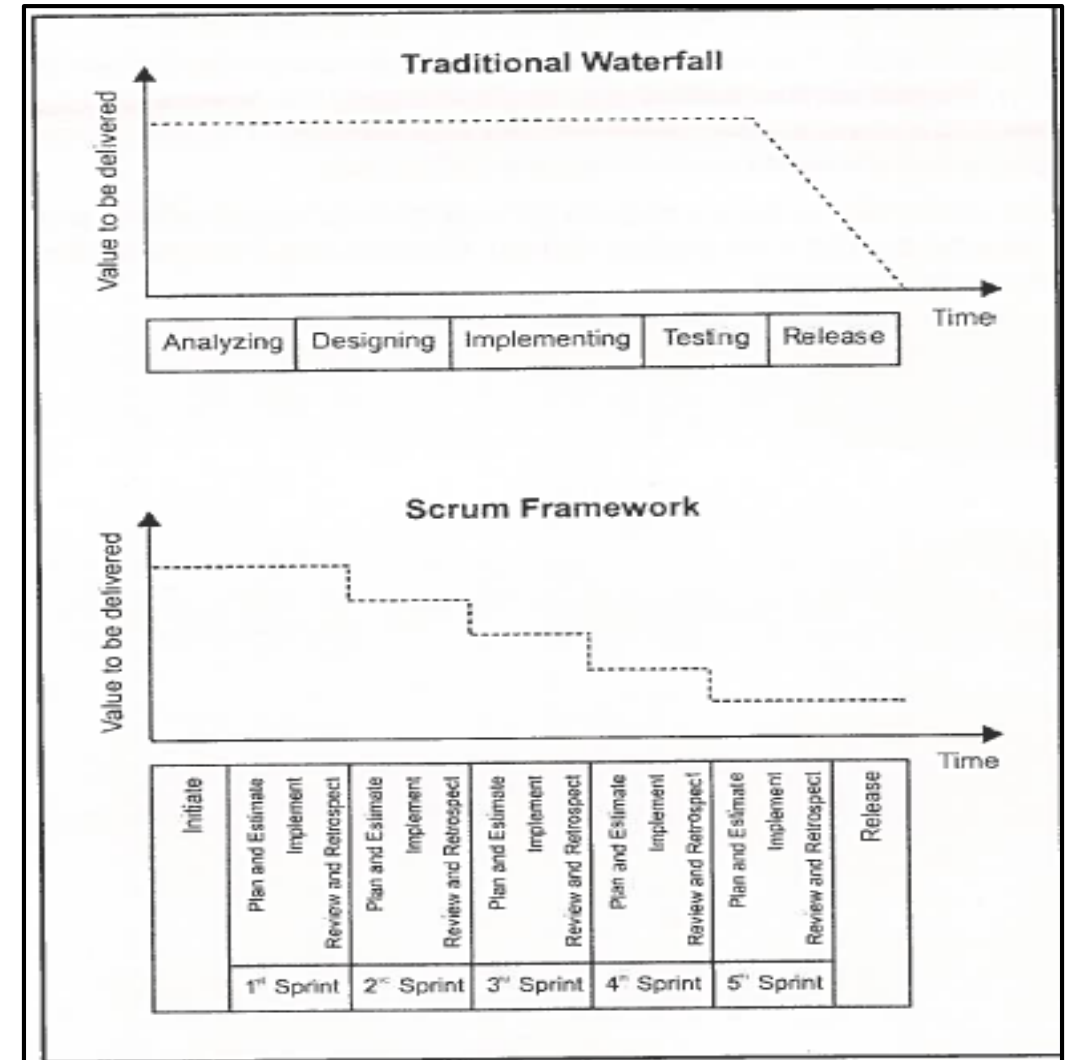
WATERFALL IN CONTRAST WITH AGILE DEVELOPMENT



SCRUM - Cascade Vs SCRUM

Approach	Agile	Waterfall
Emphasis	People	Process
Domain	Unpredictable/Exploratory	Predictable
Documentation	Minimal-only as required	Comprehensive
Quality Assurance	Customer Centric	Process centric
Process Style	Iterative	Linear
Organization	Self-organized	Managed
Upfront Planning	Low	High
Perspective towards change	Adaptability	Sustainability
Prioritization of requirements	Based on business value and regularly updated	Fixed in the project plan
Management Style	Collaborative, Servant Leadership	Command and control
Performance Measurement	Business value	Plan conformity
Return on Investment	Early/throughout project life	End of project life

“Project life cycles can range along a continuum from **predictive approaches at one end to adaptive or agile approaches** at the other. In a predictive life cycle, the project deliverables are defined at the beginning of the project and any changes to the scope are progressively managed. In an adaptive or agile life cycle, the deliverables are developed over multiple iterations where a detailed scope is defined and approved for each iteration when it begins.” PMI



SCRUM ROLES

Product Owner



PRODUCT OWNER

- Represents the stakeholders and is responsible for ensuring that the **Scrum Team delivers value**
- It is commonly called the **Voice of the Customer**
- Creates the Epic(s) and the User Stories
- **Clearly expressing** Product Backlog items

Sole person responsible for managing the Product Backlog

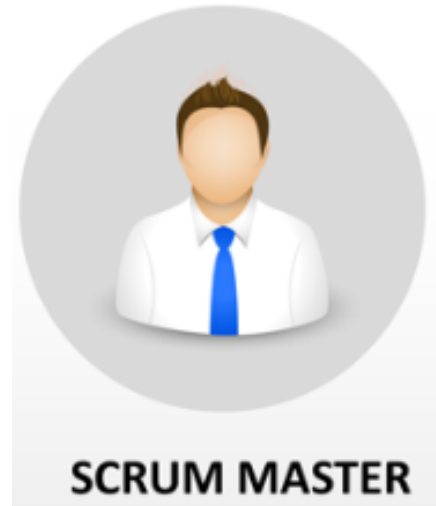
Process	Product Owner Responsibilities
Create Project Vision	<ul style="list-style-type: none"> • Defines the Project Vision • Helps create the Project Charter and Project Budget
Identify Scrum Master and Stakeholders(s)	<ul style="list-style-type: none"> • Helps finalize Scrum Master for the project • Identifies Stakeholders (s)
Form Scrum Team	<ul style="list-style-type: none"> • Helps determine Scrum Team members • Helps develop a Collaboration Plan • Helps develop the Team Building Plan with Scrum Master (s)
Develop Epic(s)	<ul style="list-style-type: none"> • Creates Epic(s)
Create Prioritize Product Backlog	<ul style="list-style-type: none"> • Prioritizes Prioritized Product Backlog items • Defines Done Criteria
Conduct Release Planning	<ul style="list-style-type: none"> • Creates Release Planning Schedule • Helps determine Length of Sprint
Create User Stories	<ul style="list-style-type: none"> • Helps create User Stories • Defines Acceptance Criteria for every User Story
Approve, Estimate and Commit User Stories	<ul style="list-style-type: none"> • Approves User Stories • Facilitate Scrum Team and commit User Stories

Process	Product Owner Responsibilities
Create Tasks	<ul style="list-style-type: none"> • Explains User Stories to the Scrum Team while creating the Task List
Estimate Tasks	<ul style="list-style-type: none"> • Provides guidance and clarification to the Scrum Team in estimating tasks
Create Sprint Backlog	<ul style="list-style-type: none"> • Helps Scrum Team in creating Sprint Backlog
Create Deliverables	<ul style="list-style-type: none"> • Clarifies business requirements to the Scrum Team
Groom Prioritized Product Backlog	<ul style="list-style-type: none"> • Grooms the Prioritized Product Backlog
Demonstrate and Validate Sprints	<ul style="list-style-type: none"> • Accepts/Rejects Deliverables • Provides necessary feedback to Scrum Master and Scrum Team • Updates Release Plan and Prioritized Product Backlog
Ship Deliverables	<ul style="list-style-type: none"> • Helps deploy Product Releases and coordinates this with the customer
Retrospect Project	<ul style="list-style-type: none"> • Participates in Retrospect Project Meetings

SCRUM ROLES

Scrum Master

- **Servant-leadership** concept for the Scrum Team, in which leaders achieve results by giving attention to the needs of those they lead
- The Scrum Master helps everyone change these interactions to **maximize the value (Maximize)**



- Ensures project management is **progressing** smoothly and Scrum Team Members have all the tools necessary to get the work done
- Helps those outside the Scrum Team understand which of their interactions with the Scrum Team are helpful and which aren't (**Filter**)

Scrum Master ensures Scrum processes are correctly followed by the Scrum Core Team members (Facilitator)



Serves to the Product Owner

- Helping the Scrum Team understand the need for clear and concise Product Backlog items
- Ensuring the Product Owner knows how to arrange the Product Backlog to **maximize value**;
- Facilitating Scrum events as requested or needed

Serves to the Development Team

- Leading and coaching the organization in its Scrum adoption
- Helping employees and stakeholders understand and **enact Scrum and empirical product development**
- Causing **change that increases the productivity** of the Scrum Team

Serves to the Organization

- **Leading and coaching the organization** in its Scrum adoption
- Planning **Scrum implementations within the organization**
- Working with other **Scrum Masters to increase the effectiveness** of the application of Scrum in the organization

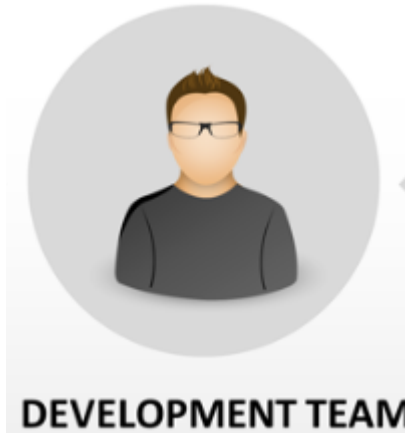
Process	Scrum Master Responsibilities
Identify Scrum Master and Stakeholders(s)	<ul style="list-style-type: none"> Helps identify Stakeholders (s) for the project
Form Scrum Team	<ul style="list-style-type: none"> Facilitates selection of the Scrum Team Facilitates creation of the Collaboration Plan and the Team Building Plan Ensures back-up resources are available for smooth project functioning
Develop Epic(s)	<ul style="list-style-type: none"> Facilitates creation of Epic(s) and Personas
Create Prioritize Product Backlog	<ul style="list-style-type: none"> Helps Product Owner in creation of the Prioritized Product Backlog and the definition of the Done Criteria
Conduct Release Planning	<ul style="list-style-type: none"> Coordinates creation of Release Planning Schedule Determines Length and Sprint with the Product Owner
Create User Stories	<ul style="list-style-type: none"> Assists the Scrum Team in creating User Stories and their Acceptance Criteria
Approve, Estimate and Commit User Stories	<ul style="list-style-type: none"> Approves User Stories Facilitate Scrum Team and commit User Stories
Create Tasks	<ul style="list-style-type: none"> Facilitates the Scrum Team in creating the Task List for the next Sprint

Process	Scrum Master Responsibilities
Estimate Tasks	<ul style="list-style-type: none"> Assists the Scrum Team in estimating the tasks agreed to for the Sprint
Create Sprint Backlog	<ul style="list-style-type: none"> Assists the Scrum Team in developing the Sprint Backlog and the Sprint Burndown Chart
Create Deliverables	<ul style="list-style-type: none"> Supports the Scrum Team in creating the Deliverables agreed to for the Sprint Helps update the Scrumboard and the Impediment Log
Conduct Daily Stand Up	<ul style="list-style-type: none"> Ensures that the Scrumboard and the Impediment Log remain updated
Groom Prioritized Product Backlog	<ul style="list-style-type: none"> Facilitates Prioritized Product Backlog Review Meetings
Convene Scrum of Scrums	<ul style="list-style-type: none"> Ensures that issues affecting the Scrum Team are discussed and resolved
Demonstrate and Validate Sprints	<ul style="list-style-type: none"> Facilitates presentation of completed Deliverables by the Scrum Team for the Product Owner's approval
Retrospect Sprint	<ul style="list-style-type: none"> Ensures that ideal project environment exists for the Scrum Team in the succeeding Sprints
Retrospect Project	<ul style="list-style-type: none"> Represents the Scrum Core Team to provide lessons from the current project, if necessary

SCRUM ROLES

Scrum Team

- **Iterative** product delivery
- Structured and **empowered** by the organization to organize and manage their own work
- **Self-organized.** No one (not even the Scrum Master) tells the Development Team how to turn Product Backlog
- **Cross-functional.** With **all of the skills** as a team necessary to create a product Increment
- Collocated and face-to-face communication
- May have specialized skills and areas of focus, but **accountability** belongs to the Development Team as a whole
- Scrum recognizes no titles for Team members other than Developer (**No hierarchies**). There are no exceptions to this rule



Group of people who are **responsible for understanding the business requirements specified by the Product Owner, estimating User Stories, and creating the project deliverables**

SCRUM ROLES

Scrum Team Size

Optimal Development Team size is small enough to remain agile and large enough to complete significant work within a Sprint.



- Decrease interaction
- Smaller productivity gains
- Encounter Skills constraints
- Team unable to deliver a potentially releasable increment



- Having more than nine members too much coordination
- Generate too much complexity for an empirical process
- Increase the communication effort
- Lost of Focus on the development



Process	Scrum Team Responsibilities
Form Scrum Team	<ul style="list-style-type: none"> Provides inputs for creation of the Collaboration Plan and the Team Building Plan
Develop Epic(s)	<ul style="list-style-type: none"> Ensures a clear understanding of Epic(s) and Personas
Create Prioritize Product Backlog	<ul style="list-style-type: none"> Understands the User Stories in the Prioritized Product Backlog
Conduct Release Planning	<ul style="list-style-type: none"> Agrees with the other Scrum Core Team members on the Length of Sprint Seeks clarification on new products or changes in the existing products, if any, in the refined Prioritized Product Backlog
Create User Stories	<ul style="list-style-type: none"> Provides inputs to the Product Owner on creation of User Stories
Approve, Estimate and Commit User Stories	<ul style="list-style-type: none"> Estimates User Stories approved by the Product Owner Commit User Stories to be done in a Sprint
Create Tasks	<ul style="list-style-type: none"> Develops Task List based on agreed User Stories and dependencies
Estimate Tasks	<ul style="list-style-type: none"> Estimates tasks identified and, if necessary, updates the Task List
Create Sprint Backlog	<ul style="list-style-type: none"> Develops the Sprint Backlog and the Sprint Burndown Chart
Create Deliverables	<ul style="list-style-type: none"> Creates Deliverables Identifies risks and implements risk mitigation actions, if any Updates Impediment Backlog and dependencies
Conduct Daily Stand Up	<ul style="list-style-type: none"> Updates Burndown Chart, Scrumboard, and Impediment Log Discusses issues faced by individual members and seeks solutions to motivate the team Submits Change Requests, if required
Groom Prioritized Product Backlog	<ul style="list-style-type: none"> Participates in Prioritized Product Backlog Review Meetings
Convene Scrum of Scrums	<ul style="list-style-type: none"> Provides inputs to Scrum Master for the Scrum of Scrums Meetings
Demonstrate and Validate Sprints	<ul style="list-style-type: none"> Demonstrates completed deliverables to the Product Owner for approval
Retrospect Sprint	<ul style="list-style-type: none"> Identifies improvement opportunities, if any, from the current Sprint and agrees on any actionable improvements for the next Sprint
Retrospect Project	<ul style="list-style-type: none"> Participates in the Retrospect Project Meeting

SCRUM ROLES

Others not core roles

Project Manager

Manager

Stakeholder

Customer

Final User



SCRUM - EVENTS AND CEREMONIES

Scrum Planning

Scrum Daily Meeting

Scrum Review

Scrum Retrospective

SCRUM LYFE CYCLE

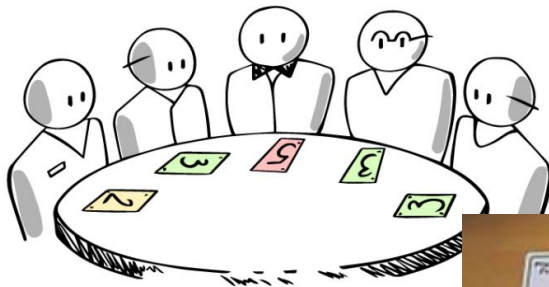


SCRUM – ARTIFACTS

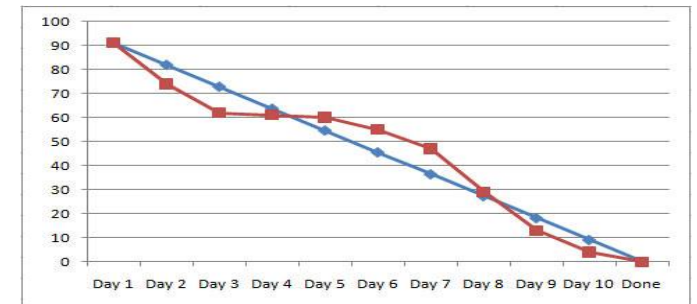
User Stories

User Story	Acceptance Criteria
As a shopper I want to view a list of products so I can select some to purchase	<ul style="list-style-type: none"> * See a thumbnail image for each product * Click to view details for product * Add to cart from detail page * Search for a product * View products by category
As a shopper I want to review my cart so I can make adjustments prior to checkout	<ul style="list-style-type: none"> * View quantities and items in the cart * See a total cost before tax and shipping * Remove items * Adjust quantity of items
As a shopper I want to check out so I can get my products shipped to me	<ul style="list-style-type: none"> * Click to navigate to a product detail page * Trigger checkout from any page, if there are items in the cart * Enter a shipping address * Enter a billing address * Enter a credit card number * Show total including tax and shipping before finalizing * Show confirmation message after finalizing
As a shopper I want to review my orders so I can see what I've purchased in the past	<ul style="list-style-type: none"> * Verify payment via our payment processor * View a list of open and completed orders * See the status of the order * Navigate to the details of the order * Include a tracking number if the order is shipped but not delivered * Contact customer service about an order from the details page
As an administrator I want to modify the list of products so I can adjust our offerings over time	<ul style="list-style-type: none"> * Add or remove products * Modify product images * Select a category for the product * Modify category taxonomy
As a fulfillment specialist I want to print a picking report so I can prepare products to ship	<ul style="list-style-type: none"> * Print a report for all open orders since the last time I printed the report * Sort orders by time submitted
As a fulfillment specialist I want to print packing labels so I can ship packages	<ul style="list-style-type: none"> * Print all packing labels for open orders since the last time I printed labels * Electronically integrate with shipper's system to generate tracking numbers
As a finance employee I want to view analytics about orders and revenue so I can see how we're tracking against our goals	<ul style="list-style-type: none"> * Update customer order with tracking number * View dashboard with total order count and total dollar amount * Adjust range with the options of Today, This Month, Last 30 Days, Last 90 Days, and This Year * See a chart comparing total to previous period

Poker planning



Burndown Chart



WRITING GOOD USER STORIES

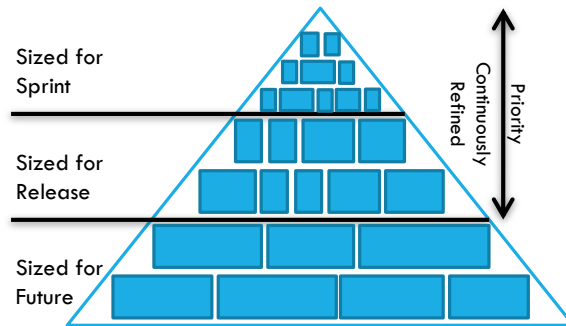
WRITING GOOD USER STORIES

- 1 Users Come First
- 2 Use Personas (fictional characters) to Discover the Right Stories
- 3 Create Stories Collaboratively
- 4 Keep your Stories Simple and Concise
- 5 Start with Epics
- 6 Refine the Stories until They are Ready
- 7 Add Acceptance Criteria
- 8 Use Paper Cards
- 9 Keep your Stories Visible and Accessible
- 10 Don't Solely Rely on User Stories

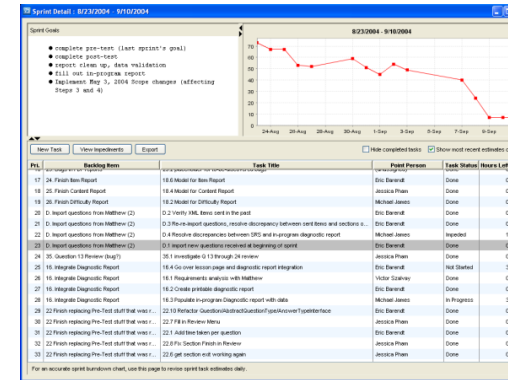
<https://www.romanpichler.com/blog/10-tips-writing-good-user-stories/>
<https://www.youtube.com/watch?v=lKr--w5WyOo>
<https://www.productplan.com/product-features/>

SCRUM — ARTIFACTS

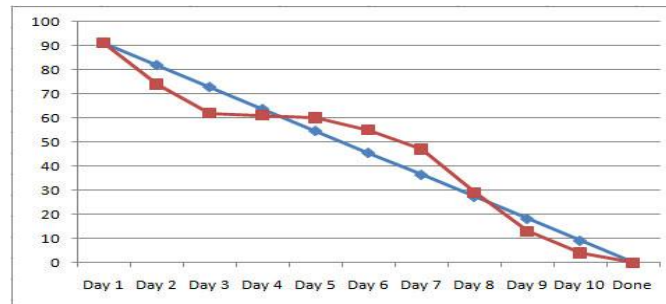
Product Backlog



Sprint backlog



Burndown Chart



Artifacts & other tools definitions

Name	Category	Definition
Project Vision Statement	Artifact	Explains the business need that the project is intended to meet
Epic(s)	Artifact	A large, unrefined user stories which is typically too big to be completed on a single Sprint
User Stories	Artifact	A very high-level definition of a requirement, containing just enough information so that the developers can produce a reasonable estimate of the effort to implement it
Sprint Burndown Chart	Artifact	It is a graphic representation that shows the rate at which work is completed and how much work remains
Personas	Other Tool	A highly detailed fictional characters that represent the majority of users and other stakeholders who may not directly use the end product
Scrum board	Artifact	Tool that helps Teams make Sprint Backlog items visible. The board can take many physical and virtual forms but it performs the same function regardless of how it looks. The board is updated by the Team and shows all items that need to be completed for the current Sprint
Prioritized Product Backlog	Artifact	List of requirements that, when turned into potentially shippable product functionality, will deliver the Product Vision
Sprint Backlog	Artifact	List of tasks identified by the Scrum team to be completed during the Scrum sprint
Impediment log	Other Tool	Technique for the Scrum Master to publicly collect all obstacles which impede the sequential work.
Release Planning schedule	Artifact	A very high-level plan for multiple Sprints. It is a guideline that reflects expectations about which features will be implemented and when they are completed. It also serves as a base to monitor progress within the project.
Product Increment	Other Tool	Sum of all the Product Backlog items completed during the current sprint and the value of the increments produced during all of the previous sprints. The Product increment must be in a usable condition regardless of when the Product Owner decides to actually release it.
Poker Planning	Artifact	Is a consensus-based, gamified technique for estimating, mostly used to estimate effort or relative size of development goals in software development . In planning poker, members of the group make estimates by playing numbered cards face-down to the table, instead of speaking them aloud. The cards are revealed, and the estimates are then discussed. By hiding the figures in this way, the group can avoid the cognitive bias of anchoring , where the first number spoken aloud sets a precedent for subsequent estimates.

SCRUM — TOOLS

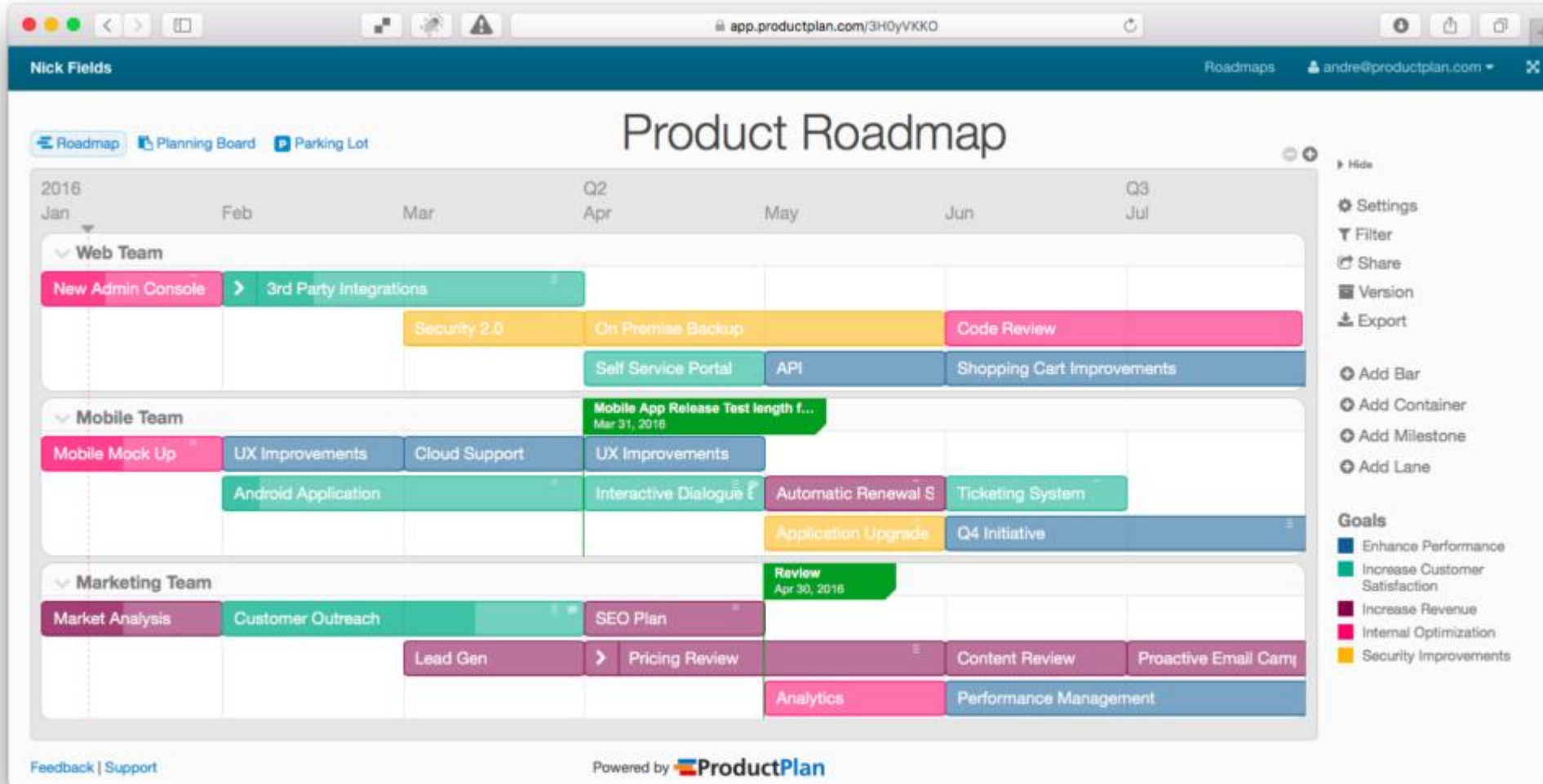
Jira

Free tools

Tools para poker planning.

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PRODUCT ROADMAP



Q&A

You have

Questions

We have

Answers